

Title (en)
OXIDATIVE COUPLING OF METHANE

Title (de)
OXIDATIVE KUPPLUNG VON METHAN

Title (fr)
COUPLAGE OXIDATIF DE MÉTHANE

Publication
EP 3786138 A1 20210303 (EN)

Application
EP 20203394 A 20160921

Priority
• US 201562242777 P 20151016
• US 201662304877 P 20160307
• EP 16855929 A 20160921
• US 2016052959 W 20160921

Abstract (en)
The present disclosure provides a method for generating higher hydrocarbon(s) from a stream comprising compounds with two or more carbon atoms (C₂₊), comprising introducing methane and an oxidant (e.g., O₂) into an oxidative coupling of methane (OCM) reactor. The OCM reactor reacts the methane with the oxidant to generate a first product stream comprising the C₂₊ compounds. The first product stream can then be directed to a separations unit that recovers at least a portion of the C₂₊ compounds from the first product stream to yield a second product stream comprising the at least the portion of the C₂₊ compounds

IPC 8 full level
C07C 2/84 (2006.01); **C07C 5/327** (2006.01); **C07C 7/00** (2006.01); **C07C 7/11** (2006.01); **C07C 9/06** (2006.01); **C07C 11/04** (2006.01); **C07C 11/06** (2006.01); **C10L 3/10** (2006.01)

CPC (source: EP US)
B01D 53/047 (2013.01 - EP US); **B01D 53/1487** (2013.01 - EP US); **B01D 53/1493** (2013.01 - EP US); **B01D 53/228** (2013.01 - EP US); **B01D 53/229** (2013.01 - EP US); **B01D 61/246** (2013.01 - EP US); **C07C 1/12** (2013.01 - US); **C07C 2/84** (2013.01 - EP US); **C07C 5/32** (2013.01 - US); **C07C 5/327** (2013.01 - EP); **C07C 7/005** (2013.01 - EP US); **C07C 7/11** (2013.01 - EP US); **C07C 7/144** (2013.01 - US); **B01D 2251/302** (2013.01 - EP US); **B01D 2251/60** (2013.01 - EP US); **B01D 2252/10** (2013.01 - EP US); **B01D 2253/102** (2013.01 - EP US); **B01D 2253/104** (2013.01 - EP US); **B01D 2253/106** (2013.01 - EP US); **B01D 2253/108** (2013.01 - EP US); **B01D 2253/1122** (2013.01 - EP US); **B01D 2253/1124** (2013.01 - EP US); **B01D 2253/116** (2013.01 - EP US); **B01D 2253/204** (2013.01 - EP US); **B01D 2253/25** (2013.01 - EP US); **B01D 2255/104** (2013.01 - EP US); **B01D 2255/20761** (2013.01 - EP US); **B01D 2256/24** (2013.01 - EP US); **B01D 2257/102** (2013.01 - EP US); **B01D 2257/108** (2013.01 - EP US); **B01D 2257/502** (2013.01 - EP US); **B01D 2257/504** (2013.01 - EP US); **B01D 2257/702** (2013.01 - EP US); **Y02C 20/40** (2020.08 - EP); **Y02P 20/151** (2015.11 - EP); **Y02P 20/50** (2015.11 - EP); **Y02P 30/40** (2015.11 - EP)

C-Set (source: EP US)
EP
1. **C07C 2/84 + C07C 11/04**
2. **C07C 2/84 + C07C 9/06**
3. **C07C 7/005 + C07C 11/04**
4. **C07C 7/11 + C07C 11/04**
5. **C07C 2/84 + C07C 11/06**
6. **C07C 5/327 + C07C 11/04**
US
1. **C07C 2/84 + C07C 11/04**
2. **C07C 2/84 + C07C 9/06**
3. **C07C 5/32 + C07C 11/04**
4. **C07C 7/005 + C07C 11/04**
5. **C07C 7/144 + C07C 11/04**
6. **C07C 7/11 + C07C 11/04**

Citation (applicant)
• US 2015210610 A1 20150730 - RAFIQUE HUMERA A [US], et al
• US 2015232395 A1 20150820 - NYCE GREG [US], et al
• WO 2015066693 A1 20150507 - THD UNIVERSITY OF CALIFORNIA [US]
• US 201514591850 A 20150107
• US 201313936783 A 20130708
• US 2014012053 A1 20140109 - IYER RAHUL [US], et al
• US 201313936870 A 20130708
• US 2014018589 A1 20140116 - IYER RAHUL [US], et al
• US 201313900898 A 20130523
• US 2014107385 A1 20140417 - SCHAMMEL WAYNE P [US], et al
• US 201414553795 A 20141125
• US 2015152025 A1 20150604 - CIZERON JOEL [US], et al
• US 201514592668 A 20150108
• US 201514789953 A 20150701
• US 9334204 B1 20160510 - RADAELLI GUIDO [US], et al
• GHOSH ET AL.: "Absorption of carbon dioxide into aqueous potassium carbonate promoted by boric acid", ENERGY PROCEDIA, February 2009 (2009-02-01), pages 1075 - 1081, XP026471989, DOI: 10.1016/j.egypro.2009.01.142
• SMITH ET AL.: "Recent developments in solvent absorption technologies at the C02CRC in Australia", ENERGY PROCEDIA, February 2009 (2009-02-01), pages 1549 - 1555, XP026472050, DOI: 10.1016/j.egypro.2009.01.203

Citation (search report)
[A] WO 2015106023 A1 20150716 - SILURIA TECHNOLOGIES INC [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2017065947 A1 20170420; EP 3362425 A1 20180822; EP 3362425 A4 20190403; EP 3362425 B1 20201028; EP 3786138 A1 20210303;
US 11001543 B2 20210511; US 2017107162 A1 20170420; US 2020048165 A1 20200213

DOCDB simple family (application)

US 2016052959 W 20160921; EP 16855929 A 20160921; EP 20203394 A 20160921; US 201615272205 A 20160921;
US 201916357012 A 20190318